

Circumferential or Sulcus-Guided Resection of Rolandic IDH1 Wildtype Glioblastoma: How I Do It: 2-Dimensional Operative Video

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Received, December 12, 2022; **Accepted,** February 10, 2023; **Published Online,** April 21, 2023.

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It has been widely demonstrated that the maximal safe resection improves prognosis in patients with glioblastoma (GBM).¹ The classical intralesional piecemeal resection (IL-PMR) for GBM can cause a progressive brain shift with loss of neuronavigation reliability and a diffuse bleeding requiring an accurate use of bipolar coagulation with an increased risk of direct and indirect (vascular) injuries. Despite these evidences, the most used technique for glioma resection is the IL-PMR in which the resection proceeds from the center toward the edges until healthy brain is identified. If we considered the Yasargil theory about the growth pattern of glioma, we can understand that many tumors are anatomically confined in a gyrus. In this way, we can use sulci as landmarks to follow the margins between the tumor and healthy tissue. Circumferential or sulcus-guided resection (SGR) was described as an alternative approach for gliomas resection.^{2,3} This surgical video illustrates the use of SGR for resecting a right Rolandic GBM. This microsurgical approach can maximize the resection and the patient safety because it decreases bleeding and the consequent necessity of bipolar use with possible vascular injuries. Therefore, the en-bloc disconnection, avoiding progressive decompression, improves neuronavigation accuracy reducing the progressive brain shift effect. We believe that the SGR technique could be effective to maximize resection and safe even in eloquent areas, minimizing the risks of postoperative complications. The patient's presentation, rationale, key surgical steps, and outcomes are discussed, and informed consent for surgery was obtained. The patient consented to the publication of his/her image.

KEY WORDS: Circumferential or sulcus-guided resection, Glioblastoma, Low-grade gliomas, Intralesional approach, Piecemeal resection

Operative Neurosurgery 25:E49, 2023

<https://doi.org/10.1227/ons.0000000000000711>

Watch now at <http://dx.doi.org/10.1227/ons.0000000000000711>

Funding

This study did not receive any funding or financial support.

Disclosures

The authors have no personal, financial, or institutional interest in any of the drugs, materials, or devices described in this article.

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